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Abstract

Growing Numbers of Small Farms in the North Central States

Using data from the Censuses of Agriculture for 1959, 1964, and 1969, and from the 1974 Agriculture Census Preliminary Reports, the paper discusses the distribution of small farms in the North Central region. Small farms are operationalized in terms of farms of 50 acres or less. During the period 1969 to 1974 the total number of farms in the North Central region decreased by 94,800 (-8.2%), while the number of small farms increased by 18,500 (+11.4%). The growth in small farms can be observed in all states except Ohio (where the same trend is only beginning to emerge), and is a dramatic reversal from the trend between 1959 and 1964 when the number of small farms in the region declined by 45,000 (-20.6%). However, the growth in small farms is strongly concentrated in Illinois, Iowa, Minnesota and Wisconsin.

Using county level data for those four states, the nature of this resurgence in small farms is analyzed. The ecological distribution of small farm growth is analyzed, including relationships to such variables as population density, urbanization, population change, agricultural land values, and environmental "amenities." The data indicate that while the distribution of small farms is related to several variables, a modified shift-share analysis indicates that the growth in small farms is widespread in the region and not strongly associated with specific other county level variables. The paper indicates needs for further research.

GROWING NUMBERS OF SMALL FARMS IN THE NORTH CENTRAL STATES

Introduction

During the past fifty years, rural America has experienced what is popularly referred to as the "agricultural revolution," marked by tremendous increases in productivity, major changes in technology, and large increases in the ratio of capital to labor (Bertrand, 1978:76-77). Since the 1930s, the increasing average size of farms and the decline in numbers of farms and farmers have become facts which are widely accepted by those conversant with the economic realities of commercial agriculture (Ball and Heady, 1972:43).

In the past decade the trend toward fewer and larger farms has slowed down considerably, but the prospect for small farms continues to be less than encouraging. A number of authors have predicted a substantial further disappearance of small farms, in keeping with earlier trends (Orazem, 1972:76; Daly et al., 1972:314). It is against the background of these expectations that this paper will document an interesting and largely unnoticed reversal in the trend for small farms in the Midwest. Since 1969, and in a limited sense even earlier, the number of small farms in the North Central Region has increased substantially. Such an increase is not only surprising, in view of the familiar decline in number of all farms, but the latest available figures, for 1974, suggest that the reversal is either absent or much less evident in other regions of the country.

Background and Problem Statement

While the relative insignificance of small farms as a source of the nation's food and fiber is recognized, the issues surrounding the small

farm are still critical in shaping future agricultural and rural development policies. The so-called agricultural revolution of the 1950s and 1960s created serious social and economic problems for both rural communities and the cities which received rural migrants. Many of these problems could have been avoided had planners and policy makers predicted and prepared for the consequences of the drastic changes which took place (Bertrand, 1978: 75). It has become increasingly evident that trends within the agricultural sector, including the issue of survival or extinction of small farms, have far-reaching effects on the well-being of people and communities. Beyond questions of the local impact of change, however, the trend toward fewer and larger farms is giving rise to more basic questions about the structure of the agricultural industry and of American rural society. Large and highly capitalized units supply the nation's food, and the idealized "family farm," long viewed as the basic building block of agrarian social structure, is seen by many as a thing of the past.

Interest in small farms and their well-being has recently been articulated in at least two different quarters. Those charged with national agricultural policy have shown renewed interest in small farms as expressed in the authorization of funds for research and extension activities aimed at small farmers in the Food and Agricultural Act of 1977 and subsequently, although funds have not yet been appropriated for this purpose. As pointed out by a task force of the North Central Regional Center for Rural Development (1978), the orientation of these programs aimed at small farmers appears to be toward strengthening the economic and social wellbeing of rural residents, within the context of the larger rural development effort. The emphasis is on income improvement and providing services to small farmers.

A second significant interest in small farms comes from a segment of the population concerned with counteracting the major trends in our society toward specialization, bureaucratization, scale enlargement, and centralized control. While the adherents of such societal "counter-evolutionary" goals for society are probably not large in number, they incorporate such articulate spokesmen as Schumaker (Small is Beautiful) and Wendell Berry (The Unsettling of America: Culture and Agriculture) and their position is influential in society. Spokesmen for this position argue essentially that a diversified small farm agriculture is in the best interest of the agriculturists, since it can provide a dignified lifestyle for large numbers of them. They also argue benefits for the total society, since a large class of independent small farmers is of social significance both locally, in supporting a diversified rural social system, and nationally, through counteracting some of the economic (e.g., energy dependency) and social (e.g., monopolization) consequences of large scale agriculture (Todd, 1976; Merrill, 1976).

Unfortunately, knowledge about small farms and the people on those farms is quite scanty. Although there has recently been a renewal of interest and discussion, there has been little definitive research on the locational context of small farms, and much less research on the characteristics, goals, and motivations of the small farmers and their families. A key element in our lack of knowledge about small farms is the unfortunate fact that data from the Census of Agriculture cannot be linked with demographic data from the Census of Population. We thus lack the basic descriptive information which would provide the basis for design of more probing studies of small farm problems.

The part-time farming literature, which overlaps the literature on small farms to a substantial degree, contains suggestions that perhaps a new breed of small farmer is emerging at this time. It is suggested that at least some small farms currently do not fit the traditional conceptualization of the small farm as one stage or step in the movement of people into or out of full-time commercial agriculture (Fuguitt et al., 1977:1). Fuller (1975:51) hypothesizes that "part-time farming has become an end in itself as well as a means to an end." Data published by the USDA (1978) also indicate that farms with farm incomes of less than $2,500 had off-farm family incomes averaging $15,100. And, along the same lines, anecdotal accounts in the media suggest that the small farm is not necessarily characterized by poverty, but is increasingly becoming the locus of middle and upper class lifestyle preferences. Such possibilities may have only tangential relevance for commercial agriculture, but they relate very directly to the broader question of the current role of land in defining rural social structure (Newby, et al., 1978).

In the present study we attempt to undertake some of the necessary descriptive work which should form a prelude to in-depth analyses. We rely on secondary, largely county-level data from various sources to pursue two goals. First, we document a recent increase in numbers of small farms which is apparently most pronounced in the North Central Region. And, second, we attempt to describe the locational context of growth and decline in small farms in part of the North Central Region, in an effort to raise questions for future research.

Small farm definition

Not least among the conceptual problems which hinder research on small farms is the lack of agreement on a definition of the small farm itself. Those persons familiar with the Census of Agriculture are also familiar with the fact that both the definition of what is to be counted, i.e., the definition of a farm, and the criteria used to assess farm size have changed over time. Without dwelling on the history of those changes, suffice it to say that our interest in the trend in small farm numbers led us to capitalize on the fact that preliminary data from the most recent, 1974, Census of Agriculture were reported in terms of the "old," or 1959, definition of a farm. The disadvantages of using those data are that preliminary reports may contain errors and the data in them are very limited; for example, the preliminary reports did not include data on farm sales. The advantage is that one can trace trends in farm numbers from 1959 through 1974 without being plagued by changes in definitions. In short, our ability to trace trends in small farm numbers was limited by data availability to a definition of the small farm as one less than 50 acres in size.[1/]

It is acknowledged that there are problems with using an acreage definition of the small farm, or the currently preferred gross sales definition, independently of each other. Both depend heavily on the type of agricultural activity involved and will mislead by inappropriately including or excluding some farm units. Lewis (1978) has shown, however, that either type of definition reveals very substantial numbers of small farms still in existence, though the sales definition singles out a higher number of small units. In a sense, then, our use of an acreage definition, and a low one, understates the number of small farms, but this does not seriously affect our ability to describe trends in numbers over time.[2/]

Presentation of Data

Data are presented in the following sections, starting first with a description of recent trends in numbers of farms of various sizes for the U.S. as a whole and the four census regions. This is followed by a more detailed presentation of small farm trends in the North Central Region from 1959 onward and the most recent trend data for each state in the region. The third and final segment of data presentation is focused on the four states in the region in which increase in numbers of small farms is most prominent: Illinois, Iowa, Minnesota, and Wisconsin. Here an effort is made to determine the characteristics of those counties where small farm growth or decline is most pronounced.

The data reported below are all aggregate data, at the national, regional and county level. We have obviously depended heavily on the Censuses of Agriculture for 1959, 1964, 1969, and 1974 (Preliminary). In the analysis of growth trends in the four states listed above, we have introduced other county-level materials derived from the U.S. Census County and City Data Book for 1972, and Population Estimates--Current Population Reports, Series P-26. The designation of counties as Metropolitan (SMSA), Nonmetropolitan but adjacent, and nonmetropolitan nonadjacent is in terms of county status in 1974.

National and regional trends

Table 1 shows the changes in numbers of farms between 1969 and 1974 for the U.S. as a whole and, separately, for the four census regions. We have collapsed farm size categories in the table in order to simply the presentation, but the pattern of change is apparent even though the categories are broad. Farm numbers as a whole declined, as shown in the last column of

the table, and the bulk of that decline stems from disappearance of units in the intermediate size categories. Large farms, in this case farms of 1,000 acres or more, have increased in numbers, as one would expect, though the rate of increase varies among the regions and the West actually shows a small loss.

The pattern of change in numbers of small farms, those under 50 acres in size, shown in the first column of Table 1, is perhaps less familiar than the change patterns described thus far. Small farm numbers declined for the United States as a whole between 1969 and 1974, but at a modest rate of only 1.8 percent. The several census regions experienced strikingly different patterns of change, however. Small farms are much more numerous in the Southern and North Central Regions, as shown in the table. But while the South lost some 36.6 thousand small farms between 1969 and 1974, the North Central Region actually gained 18.5 thousand.

Both the Northeast and the West also experienced a net gain in small farms but the number of units involved is relatively small. Furthermore, though it is not shown in Table 1, the gain in small farm numbers in the Northeast and the West is exclusively in the under 10 acre size class. This is not the case for the North Central region, as will be shown below. In any case, the increase in both absolute numbers of small farms and the percentage increase are sharply higher in the North Central Region than in the Northeast or the West.

The general change picture for the North Central Region is clearly one of a "flattening" of the distribution of farm numbers arrayed by size of farm. Farm numbers are declining in the intermediate size classes and increasing at a substantial rate at both extremes of the distribution.

Contrary to frequent perceptions, the structure of agriculture in the North Central Region is becoming more heterogeneous, in terms of the crude size categories we have used here. In the next section we concentrate on the lower extreme of the size distribution only, examining trends in more detail. And we will focus on the North Central Region only, because the reversal in the small farm trend pattern is most substantial there.

The North Central Region over time

In Table 2 we have displayed the small farm trend pattern for the North Central Region from 1959 through 1974.[3/] It is apparent from the figures shown in the table that very small farms, those less than 10 acres in size, disappeared at quite a rapid rate from 1959 to 1964, and then started to increase in numbers after 1964. The increase in numbers continued through 1974 so that there were actually almost 2,000 more farms of less than 10 acres in size in the region in 1974 than there had been in 1959. The trend pattern is similar for farms in the 10 to 49 acre size class, except that the change in pattern from decline to actual growth did not become evident until the 1969-1974 period.

Table 2 also shows that only about one-fourth of the small farms in the region are under 10 acres in size. The median size of small farms in the region, given the size definition we are using here, would probably be a unit of 20 to 25 acres in size. A farm unit of that size would, of course, typically not generate enough income to support a family. Farming would in almost all cases have to be a sideline for the individuals and families involved. Yet, in aggregate terms, there is a substantial and increasing amount (approximately 4 million acres) of farmland involved in these small units.[4/] This fact alone would justify further investigation of the small farm phenomenon.

Table 3 shows a more detailed picture of change in small farm numbers for the 1969 to 1974 period, for each of the states in the North Central Region. Several points can be made about the data shown in Table 3. First, small farms are most numerous in the Eastern portion of the region. The Plains States stand out in particular as having relatively few small farms, as one would expect in view of both the population density and agricultural characteristic of the Plains.

Second, only Ohio of all of the states in the North Central Region continued to show a loss in small farm numbers in the 1969-74 period. Ohio had more small farms than any other state in the region in 1969 and continued to lose small farms in the 1969 to 1974 period, though at a very modest rate (only 1.2 percent). Actually, data not displayed here show that Ohio has been gaining very small farms, in the 1 to 9 acre category. The change pattern for Ohio may be more like that of the Northeast than the North Central Region, but we can only speculate at this point.

Third, and finally, the absolute increase in number of small farms, shown in the third column of Table 3, is quite unevenly distributed across the several states. Two-thirds of the regional increase in small farm numbers from 1969 to 1974 is concentrated in four states: Illinois, Wisconsin, Iowa and Minnesota. When this concentration of the numerical increase is coupled with the fact that the same four states had only one-third of the region's small farms in 1969, it suggests that the trend reversal, for whatever reason, is centered in what might be called the heartland of the region. Specifically, there is a distinct change in pattern evident in the four states, and that arouses one's curiosity.

With data now available we can only begin to assess the causes and consequences of the reversal in small farm trends. We have chosen to concentrate on the four states most centrally involved in the small farm reversal, however, in order to assess the locational context of small farm growth and decline. With that still preliminary, and still descriptive, step we would hope to set the stage for formulation of more probing research questions.

Sub-regional change patterns

Small farms in the four-state subregion (as in the region as a whole) tend to be concentrated near population centers, as might be expected. It is plausible to assume that most small farms provide, first, a place of residence, and, second, a supplementary source of income for people employed in nonfarm occupations. Jobs are most plentiful in cities, and presumably for that reason counties of metropolitan status tend to have more small farms in them than other counties, as shown in Table 4. Two-thirds (66.1 percent) of the metropolitan counties in the four states of concern here have at least 220 small farms within their boundaries, whereas this is true for less than 15 percent of the nonadjacent counties (Table 4).

While the distribution of small farms may show a decidedly metropolitan tilt, the changing trend in number of small farms may not be a determinedly metropolitan phenomenon. In measuring change, however, a difficulty arises in selecting the appropriate measure. Proportional change tends to be affected very heavily by the initial base number. Since the counties in the analysis contain as few as 3 small farms and as many as 787 small farms, measuring change in terms of a proportion easily leads to questionable interpretations. Similarly, absolute change in small farm numbers could be expected to be most noticeable in counties with a high concentration of small

farms, the metropolitan counties. As a matter of fact, larger absolute increases in small farm numbers are more frequent in metropolitan than in nonmetropolitan counties in the four states. More than half (56.4%) of the metropolitan counties had experienced a growth of at least 35 new farms, while less than one-third (30.8%) of the nonadjacent counties had experienced a growth of more than 35 small farms within the same period (Table 5).

Another measure of small farm growth at the county level is the difference between the actual number of small farms in 1974 and the expected number of small farms in 1974, based on the four-state growth rate of small farms, 1969 to 1974. This modified, shift-share variable measures relative growth, indicating whether or not a county is lagging or surpassing the four-state rate of increase in small farms. It is calculated by the following formula:

$$\text{Shift-share} = \text{Small farms}^{74}_{\text{County}} - \left[\text{Small farms}^{69}_{\text{County}} \times \frac{\text{Small farms}^{74}_{\text{region}}}{\text{Small farms}^{69}_{\text{region}}}\right]$$

The interpretation of this measure is consistent, and relatively simple. For example, a shift-share of +20 indicates that a county gained 20 more small farms than would have been expected, and that small farms are increasing more rapidly than in the region as a whole. On the other hand, a shift-share of -20 indicates that a county has 20 fewer small farms than expected, or is lagging behind the region. This interpretation is the same, regardless of whether a county has 20 or 200 small farms.

In Table 6 we show the relationship between the number of small farms in a county and their relative rate of growth. Table 6 indicates that counties with large numbers of small farms tend to be frequently ahead of the four-state trend or they tend to fall behind, somewhat more often than

the majority of the counties with less than 125 small farms, which most often were found close to the four-state trend. This relative measure of change thus allows us to compare the performance of various counties with one another, relatively independent of the effects of the initial presence of small farms.

Table 7 shows that between metropolitan and nonmetropolitan counties the relative change in small farm numbers is fairly evenly spread. Counties which exceeded the rate of increase for the four-state subregion are classified in the two right-hand columns of Table 7, while counties which lagged behind the average rate of increase are classified on the left. By and large the reversal in small farm growth seems to be independent of the metropolitan status of counties in the four states.

One might speculate that the by now familiar reversal of historic migration patterns (Beale, 1975) could also be having some effect in reversing small farm trends, even in relatively remote rural counties (Fliegel, et al., 1978). Table 8 contains data more directly germane to the question of a possible relationship between overall population growth patterns and the small farm reversal. Those counties in the four-state subregion which experienced most rapid population growth in the 1970-75 time period, are in fact more likely to have experienced relatively high increases in numbers of small farms from 1969 to 1974, as shown in the last row of Table 8.[5/] Relatively rapid population increase, including the recent increases in some rural counties, may be associated with a relatively rapid increase in numbers of small farms, while slow rates of growth or population loss are not associated with the relative rate of small farm growth. Of course, one should not infer from these modest findings that the "return" migrants are

overly prone to settle on farms. We are dealing here with changes in numbers of small farms which are very small relative to population change numbers. Specifically, the four states of concern here gained 12,099 small farms between 1969 and 1974. We view such an unexpected increase as consequential, but are well aware that it could at best involve only a very small sub-set of the total population movement in the subregion.

Finally, Table 9 again shows some data which are relevant to the broader issue of a possible relationship between larger demographic trends and the small farm reversal. We hypothesized that the small farm reversal might reflect a life-style preference, and particularly a preference for scenic amenities in rural areas. Conversely, we considered it to be unlikely that truly prime farmland would be attractive to would-be small farmers in view of recent land prices. In order to at least partially test that notion, we used a measure (derived from USDA Forest Resource Bulletins for the various states) based on the proportion of county land in trees for each county in the four selected states (Williams, 1978). The results of that tabulation are displayed in Table 9 and show a pattern which is somewhat irregular but pointing toward neither wooded nor relatively treeless areas as the locus of small farm increase.

Conclusions and Implications

The descriptive materials we have presented document several points. First, while total farm numbers have continued to decline, there has been a reversal in small farm disappearance in some parts of the United States in recent years. Second, the trend reversal, evidenced by an increase in numbers of farms of less than 50 acres, is most strongly apparent in the North Central Region, and stands in sharp contrast to a continued loss of

small farms in the region of historic small farm concentration, in the South. Third, increases in numbers of small farms seem to be quite general throughout the North Central Region, with the exception of Ohio, which has continued to lose small farms, though at a very low rate. And, fourth, though the increase in small farms is widespread, the bulk of the increase in the North Central Region is concentrated in just four states: Illinois, Iowa, Minnesota, and Wisconsin.

Our efforts to relate small farm growth or decline in the four-state subregion to other county characteristics are less easy to summarize. We demonstrated that small farms are most densely concentrated in or near metropolitan centers, and in absolute numbers metropolitan counties are more likely to experience larger increases. Such concentration is consistent with the expectation that families on small farms would be heavily dependent on non-farm employment, and thus would prefer to be near larger labor markets. When changes in small farm numbers are expressed in a shift-share format, however, it becomes clear that the pattern of small farm change is quite general in all types of counties regardless of metropolitan status. We next explored whether recent population gains would be associated with relatively large increases in numbers of small farms. The evidence on the latter point was consistent with our expectations, but it was far from conclusive. Similarly, on the assumption that persons establishing small farms might be seeking out scenic areas in a quest for the benefits of a rural life style, we tested whether the relative goowth of small farms was greatest in counties with much land in trees. Again, the results were mildly encouraging but not at all conclusive.

Given that recent population increases have not favored central cities, it is plausible to assume that an unexpected increase in small farm numbers might be associated with a geographically more diffuse population distribution pattern. Present data do not permit us to reject such a possibility, nor can we confirm it. County-level indicators are crude measures, and one must recognize that while a change in farm numbers may be substantial in the context of agricultural trends, the agricultural segment of the population is dwarfed by county population totals. Since small farms are not being established in overwhelming numbers, aggregate analyses may not be sufficiently sensitive to determine variables associated with this small farm growth. We are left with the general conclusion that while the small farm reversal is quite widespread in the subregion, secondary data probably will not be very helpful in further efforts to locate the increases, much less determine what the causes and consequences of the increase may be. It is true that the current 1979 Census of Agriculture should be useful in assessing more recent change patterns, but definitional changes (in 1974) will be an obstacle in terms of performing the type of trend analysis we began here. Primary data will have to be gathered, to determine the nature of present-day small farms and their place in contemporary society.

Research Needs

What are some of the questions which should be addressed in future research? Assuming that the small farm reversal is not a temporary phenomenon, and assuming that it may become more widespread in the nation as a whole, we see a need for work on at least four rather general types of questions.

Perhaps the most general question which needs to be answered is: who is establishing the new small farms, and for what reason? As was pointed out earlier, we lack some very basic, descriptive information. We do not know now whether retirees, say, are an important element in the reversal, seeking a place to live and something productive but not too demanding to do. Hobbyists, of whatever age, may be another important element in the reversal. Alternatively, small-scale agriculture may represent an investment strategy for individuals and families, either via retention of relatively small inherited parcels or via direct investment. And one should not rule out a subsistence motivation for small farmers, though the sparse data available do not suggest high levels of poverty among small farmers (Lewis, 1978). Finally, some highly specialized, commercially successful small acreage farms do exist, but it is unclear where and how many of such farms are to be found. In summary, we lack basic information about the nature of the reversal in small farm numbers.

The relationships of the families on these small farms to agricultural and farm organizations, as well as to their communities at large, need to be explored. In recent decades small farmers have largely been considered a liability for local communities. Because of their scarce economic resources, their limited education, and their traditional values, small farmers have frequently been considered an obstacle to change and progress. However, the small farmers which are the object of our research may well turn out to be different. They probably combine off-farm resources with their farm activities. They and their families may have opted voluntarily to live on and manage a small farm. Their personal characteristics and their value profiles are likely to be quite different from that traditionally found among small farmers.

It is a matter of empirical determination to establish in what ways these small farmers contribute to their communities and to what extent they place burdens on them. Some questions may suffice to indicate the issues that need to be addressed: to what extent do these farmers participate in local farm organizations, providing membership resources? To what extent do these farmers strengthen or place a heavy burden on existing agricultural services, such as Cooperative Extension Service, and the Soil Conservation Service? Can these people be served with existing schools, health facilities, and utility networks, or do they place new and additional demands on the service structure? Are they simply commuters who choose to live in the countryside or do they participate in the life of the rural community? To what extent are they retirees, with service needs and interests different from others in the community?

Small scale agriculture does not mesh well with the supply, transportation, and marketing structure servicing commercial agriculture. Input suppliers and the technology they purvey are attuned to the specialized needs of the larger producers, not the needs of the grower for whom farming may be very much a sideline. We should know more about needs for appropriate technology and appropriate advice for the new small farmer (cf. U.S.D.A., 1978).

Finally, the emergence of a new generation of small farms raises questions about land use policy: to what extent does the farmland occupied by the new small farmers represent an optimum use of land resources? We are familiar with the recent pattern of small farm disappearance, with the aggregation of smaller units into larger production systems, accompanied by abandonment of redundant farmsteads, and removal of obstructive fence

rows. The diversity of a traditional agriculture has been replaced by more specialized production systems and by an increasing intensity in the use of farmland. It is plausible to assume that a new generation of small farms may be shifting some farmland toward more extensive rather than intensive use, given that agriculture is probably not a major source of income for many of those involved.

One could argue that scarce land resources should be used intensively, or one could argue that a diverse pattern of small farms can represent a protective greenbelt around towns and villages, an aesthetic resource in an all-too-standardized landscape. Our point here is that we do not know how the land involved in the small farm reversal is being used. Facts and figures about diversion of farmland to urban uses, highways, and airports are readily available. But a more subtle shift of farmland to what may be more extensive use, involving quite significant acreages, is not being monitored.

Table 1. Number of farms (in 000's) by size of farm, and percent change, 1969-74, for U.S. and regions.

	Farm size classes, in acres				
	< 50 a.	50-179 a.	180-999 a.	1,000 a. or more	Total
U.S.					
1969	636.6	1001.7	942.0	150.9	2730.
1974	623.9	852.8	818.5	155.3	2450.
Percent change	- 1.8	-14.9	-13.2	+ 2.9	- 10.
North Central					
1969	162.1	416.0	518.5	55.2	1151.
1974	180.6	359.4	455.9	61.0	1057.
Percent change	+11.4	-13.6	-12.1	+10.5	- 8.
South					
1969	342.1	458.5	312.8	48.9	1161.
1974	305.6	381.6	261.9	49.3	998.
Percent change	-10.5	-16.8	-16.3	+ 0.8	-14.
Northeast					
1969	32.9	68.8	49.2	1.0	151.
1974	33.4	57.7	44.0	1.2	136.
Percent change	+ 1.8	-16.0	-10.6	+19.5	-10.
West					
1969	99.3	58.4	61.5	45.8	265.
1974	104.3	54.0	56.3	43.7	258.
Percent change	+ 5.0	- 7.5	- 8.5	- 4.6	- 2.

Table 2. Change in small farm numbers from 1959 to 1974 for the North Central Region

Number of small farms (in thousands)	Year			
	1959	1964	1969	1974
1-9 acres				
No. of farms	46.4	35.8	43.6	48.3
Percent change*	-	-22.8	+17.9	+10.8
10-49 acres				
No. of farms	172.1	137.7	118.7	132.5
Percent change*	-	-20.0	-13.8	+11.6
Total, 1-49 acres				
No. of farms	218.5	173.5	162.3	180.8
Percent change*	-	-20.6	- 6.5	+11.4

*Percent change from preceding census year.

Table 3. Change in number of farms 0-49 acres from 1969 to 1974, for each state in the North Central Region

	Number of farms, 0-49 a.		Increase/decrease	Percent chan
	1969	1974	1969-74	1969-74
East North Central States				
Illinois	18,597	22,071	3,474	18.7
Indiana	24,228	25,357	1,129	4.7
Ohio	25,588	25,279	- 309	-1.2
Michigan	16,235	17,713	1,478	9.1
Wisconsin	10,429	12,871	2,442	23.4
Total E. N. C.	95,077	103,291	8,214	8.6
West North Central States				
Iowa	15,223	18,270	3,047	20.0
Kansas	8,691	10,308	1,617	18.6
Minnesota	9,442	12,578	3,136	33.2
Missouri	21,485	21,852	367	1.7
Nebraska	7,081	8,087	1,006	14.2
North Dakota	2,006	2,368	362	18.0
South Dakota	3,295	4,029	734	22.3
Total W. N. C.	67,223	77,492	10,269	15.3
Total, North Central Region	162,300	180,783	18,483	11.4

Table 4. Number of counties in the four-state subregion classified by small farm numbers and metropolitan status of the counties in 1974.

Metropolitan status	Number of counties with . . . 1-124 small farms	125-219 small farms	230+ small farms	Total
Metropolitan counties	7 (11.3)*	14 (22.6)	41 (66.1)	62 (100)
Adjacent to metropolitan	37 (27.4)	42 (31.1)	56 (41.5)	135 (100)
Nonadjacent counties	75 (46.3)	63 (38.9)	24 (14.8)	162 (100)
Total	119 (33.2)	119 (33.2)	121 (33.6)	359 (100)

*Percent of row total

Table 5 Number of counties in the four-state subregion classified by metropolitan status of county and absolute gain in number of small farms (1969-1974).

Type of County	Absolute gain in number of small farms					
	<0	1-19	20-34	35-60	>60	Total
Metropolitan Counties	10 (16.1)*	7 (11.3)	10 (16.1)	11 (17.7)	24 (38.7)	62 (100)
Adjacent to Metropolitan	11 (8.1)	28 (20.7)	30 (22.2)	35 (25.9)	31 (23.0)	135 (100)
Nonadjacent Counties	31 (19.1)	44 (27.2)	37 (22.8)	31 (19.1)	19 (11.7)	162 (100)
Total	52	79	77	77	74	359

*Percent of row total

Table 6 Number of counties in four-state subregion, classified by shift-share change in number of small farms and number of small farms in the county.

Number of small farms in the county	Number of counties in which change is. . .				
	Less than expected		More than expected		
	By more than 18 farms	By 0-18 farms	By 0-18 farms	By more than 18 farms	T
1 - 124	18 (15.1)*	37 (31.1)	43 (36.1)	21 (17.6)	1 (1
125 - 229	34 (28.6)	30 (25.2)	20 (16.8)	35 (29.4)	1 (1
230	35 (28.9)	21 (17.4)	26 (21.5)	39 (32.2)	1 (1
Total	87	87	89	95	1

*percent of row total

Table 7. Number of counties in the four-state subregion classified by shift-sh change in number of small farms and metropolitan status of counties.

	Number of counties in which change is ...				
	Less than expected		More than expected		
	By more than 18 farms	By 0-18 farms	By 0-18 farms	By more than 18 farms	Tota
Metropolitan Counties	21 (33.9)*	9 (14.5)	15 (24.2)	17 (27.4)	62 (100
Adjacent to Metropolitan	25 (18.5)	42 (31.1)	27 (20.0)	41 (30.4)	135 (100
Non-Adjacent Counties	41 (25.3)	37 (22.8)	47 (29.0)	37 (22.8)	162 (100
TOTAL	87	88	89	95	359

*Percent of row total

Table 8. Number of counties in the four-state subregion classified by shift-sh change in number of small farms and population change, 1970 to 1975.

Population change 1970-75	Number of counties in which change is ...				Total
	Less than expected		More than expected		
	By more than 18 farms	By 0-18 farms	By 0-18 farms	By more than 18 farms	
Loss	30 (23.8)*	34 (27.0)	32 (25.4)	30 (23.8)	126 (100)
Gain 0-4 percent	40 (32.0)	27 (21.6)	30 (24.0)	28 (22.4)	125 (100)
5 percent or more	17 (15.8)	27 (25.0)	27 (25.0)	37 (34.3)	108 (100)
TOTAL	87	88	89	95	359

*Percent of row total

Table 9. Number of counties in the four-state subregion classified by shift-share change in number of small farms and percent of county land in trees.

Percent of county land in trees	Number of counties in which change is ...				
	Less than expected		More than expected		
	By more than 18 farms	By 0-18 farms	By 0-18 farms	By more than 18 farms	Tota
0 - 3 percent	23 (22.1)*	25 (24.0)	28 (26.9)	28 (26.9)	104 (100
4 - 9 percent	27 (31.0)	22 (25.3)	15 (17.2)	23 (26.4)	87 (100
10 - 24 percent	25 (28.1)	17 (19.1)	18 (20.2)	29 (32.6)	89 (100
25 percent or more	12 (15.2)	24 (30.4)	28 (35.4)	15 (19.0)	79 (100
TOTAL	87	88	89	95	359

*Percent of row total

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Footnotes

1. With "farm" defined under the 1959 definition, as a place with $250 or more in sales, or at least 10 acres in size with $50 in sales.
2. We recognize thus the acreage definition does not take into account that certain types of small-acreage farms, e.g., poultry farms, may be very profitable. For our analysis we judge the highly commercialized small farms to be of minor significance, although in certain specific locations their presence may well as of importance.
3. Menominee County, Wisconsin, which has a distinctive status as a former Indian reservation, is not included in these tabulations because no 1974 Preliminary report was published for the county.
4. It may be illustrative to realize that from 1954 to 1974 the State of Illinois lost 55,000 acres to the much publicized encroachment of transportation systems, while in the five year period from 1969 to 1974 an estimated 150,000 acres were added to the small farm sector.
5. The pattern for 1970-1975 net migration, not shown, is very similar.